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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,759	07/22/2003	Ji-Rong Wen	MSI-1617US	6470

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EXAMINER
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AHN, SANGWOO

ART UNIT	PAPER NUMBER
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2166

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/624,759	<b>Applicant(s)</b> WEN ET AL.	
	<b>Examiner</b> Sangwoo Ahn	<b>Art Unit</b> 2166	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10-2003</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 20, 29 are rejected under 35 U.S.C. 101. Based on the claim language, it appears that applicant has written the claims in such a manner so as to attempt to cover each and every substantial practical application of the idea of including in a set of objects additional objects which are affiliated with a subset of the objects so as to, in practical effect, be claiming the abstract idea itself.

Claims 2, 6 – 8, 21 – 22, and 30 are also rejected for the reason discussed above.

Claim 33 is rejected under 35 U.S.C. 101 because the claimed system does not appear to necessarily include the hardware necessary to realize the underlying functionality of the recited modules.

Claims 34 – 37 are also rejected for the reason discussed above.

Claims 38 is rejected under 35 U.S.C. 101 because it appears to be directed to an abstract idea rather than a practical application of the idea. The result of “identifying” something does not appear to be a tangible result.

Claims 39 – 43 are also rejected for the reason discussed above.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 – 15, 18 – 27, 29 – 37 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 6,457,028 issued to James E. Pitkow et al (hereinafter "Pitkow")

Regarding claim 1, Pitkow discloses,

A computerized method comprising:

identifying, from a plurality of objects, a set of core objects for a community of objects (Figure 1, column 3 lines 1 – 5, column 5 lines 54 – 58, et seq.); and

expanding, based on the set of core objects, the community of objects to include a set of affiliated objects (Figure 6, column 3 lines 5 – 12, column 5 lines 54 – 61, column 7 lines 8 – 10, et seq.).

Regarding claim 2, Pitkow discloses,

repeating the identifying and expanding for a plurality of communities of objects, wherein the objects in each community of objects are all from the plurality of objects (column 3 lines 1 – 26, column 5 lines 54 – 61, et seq.).

Regarding claim 3, Pitkow discloses,

merging together a first community of the plurality of communities and a second community of the plurality of communities if there is sufficient similarity between the core objects in the first community and the core objects in the second community, wherein the merging results in a merged community including all of the objects of the first community and the second community and having a set of core objects that includes the core objects in the first community and the core objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 4, Pitkow discloses,

merging together a first community of the plurality of communities and a second community of the plurality of communities if there is sufficient similarity between the core and affiliated objects in the first community and the core and affiliated objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 5, Pitkow discloses,

identifying a first community of the plurality of communities and a second community of the plurality of communities; determining whether the first community and second community satisfy one or more constraints; and merging the first community and the second community if the one or more constraints are satisfied, wherein the merging results in a merged community including all of the objects of the first community and the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 6, Pitkow discloses,

one of the plurality of objects is one of the set of core objects for the community of objects, and is one of the set of affiliated objects for another community of objects (column 5 line 64 – column 6 line 1, column 10 lines 15; 26 – 30, et seq.).

Regarding claim 7, Pitkow discloses,

one of the plurality of objects is one of the set of core objects for multiple communities (column 9 lines 40 – 50, et seq.).

Regarding claim 8, Pitkow discloses,

one of the plurality of objects is one of the set of affiliated objects for multiple communities (column 9 lines 40 – 50, column 10 lines 26 – 30, et seq.).

Regarding claim 9, Pitkow discloses,

identifying the set of core objects for the community comprises:

identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

finding groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identifying, as a core set, one or more of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 10, Pitkow discloses,

the link threshold comprises a minimum number of objects in the plurality of objects that must each link to each object in the group (column 7 lines 56 – 58, et seq.).

Regarding claim 11, Pitkow discloses,

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expanding the community of objects comprises:

identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

identifying one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the core objects of the set of core objects (Figure 5, column 10 lines 25 – 30, et seq.); and

including, in the set of affiliated objects, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, et seq.).

Regarding claim 12, Pitkow discloses,

assigning the set of core objects to a center portion of a model (column 11 line 3: source site, et seq.);

ranking each affiliated object in the set of affiliated objects (column 10 lines 43 – 48, et seq.); and

assigning each affiliated object in the set of affiliated objects to a particular concentric portion around the center of the model in accordance with the rank of the affiliated object (column 11 line 7: destination site, et seq.).

Regarding claim 13, Pitkow discloses,

ranking each affiliated object in the set of affiliated objects in accordance with the number of links from the affiliated object to core objects of the set of core objects, wherein affiliated objects having a larger number of links to core objects have higher rankings (column 10 lines 32 – 38, et seq.).

Regarding claim 14, Pitkow discloses,

each of the plurality of objects comprises a document (Figure 5, et seq.).

Regarding claim 15, Pitkow discloses,

identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a citation in one document to another document (Figure 5, column 5 lines 3 – 7, et seq.).

Regarding claim 18, Pitkow discloses,

each of the plurality of objects comprises a web page (column 4 lines 15 – 19, column 5 lines 1 – 7, et seq.).

Regarding claim 19, Pitkow discloses,

identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a hyperlink in one web page to another web page (column 5 lines 1 – 3, et seq.).

Regarding claim 20, Pitkow discloses,

One or more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to:

identify, from a plurality of objects, a first collection of objects to be a core of a community (Figure 1, column 3 lines 1 – 5, column 5 lines 54 – 58, et seq.);

identify, from the plurality of objects, a second collection of objects that are linked to the first collection of objects; and

add, to the community, the second collection of objects (Figure 6, column 3 lines 5 – 12, column 5 lines 54 – 61, column 7 lines 8 – 10, et seq.).



Regarding claim 21, Pitkow discloses,  
each object of the second collection of objects is an affiliated object of the community (column 7 lines 5 – 10, et seq.).

Regarding claim 22, Pitkow discloses,  
the plurality of instructions, when executed by the one or more processors, further cause the one or more processors to:

identify, from the plurality of objects, additional first collections of objects to be cores of additional communities;

identify, from the plurality of objects, additional second collections of objects that are linked to the first collections of objects; and

add, to the additional communities, the additional second collections of objects (column 3 lines 1 – 26, column 5 lines 54 – 61, et seq.).

Regarding claim 23, Pitkow discloses,  
merge together a first of the communities and a second of the communities if there is sufficient similarity between the core objects in the first of the communities and the core objects in the second of the communities, wherein the merge results in a merged community including all of the objects of the first of the communities and the second of the communities and having a set of core objects that includes the core objects in the first of the communities and the core objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 24, Pitkow discloses,

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merge together a first of the communities and a second of the communities if there is sufficient similarity between the core and affiliated objects in the first of the communities and the core and affiliated objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 25, Pitkow discloses,  
identify links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

find groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identify, as the core of the community, one of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 26, Pitkow discloses,  
the link threshold comprises a minimum number of objects in the plurality of objects that must each link to each object in the group (column 7 lines 56 – 58, et seq.).

Regarding claim 27, Pitkow discloses,  
identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

identifying one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the first collection of the objects (Figure 5, column 10 lines 25 – 30, et seq.); and

including, in the second collection of objects, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, et seq.).

Regarding claim 29, Pitkow discloses,

A system to mine communities from a plurality of objects, the system comprising:

a processor; and

a memory coupled to the processor, wherein the memory includes one or more instructions that cause the processor to:

identify, from the plurality of objects, one or more core object sets from the plurality of objects, wherein each core object set is a core of a community (Figure 1, column 3 lines 1 – 5, column 5 lines 54 – 58, et seq.); and

for each of the core object sets, expand the community to include a set of affiliated objects, wherein the expansion is based on the core object set of the community (Figure 6, column 3 lines 5 – 12, column 5 lines 54 – 61, column 7 lines 8 – 10, et seq.).

Regarding claim 30, Pitkow discloses,

repeat the identifying and expanding for a plurality of communities of objects, wherein the objects in each community of objects are all from the plurality of objects (column 3 lines 1 – 26, column 5 lines 54 – 61, et seq.).

Regarding claim 31, Pitkow discloses,

identify links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

find groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identify, as a core set, one or more of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 32, Pitkow discloses,

identify links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

for each community,

identify one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the core objects of the set of core objects (Figure 5, column 10 lines 25 – 30, et seq.); and

include, in the set of affiliated objects, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, et seq.).

Regarding claim 33, Pitkow discloses,

A system comprising:

a core set identification module to identify core sets of objects for communities from a plurality of objects (Figure 1, column 3 lines 1 – 5, column 5 lines 54 – 58, et seq.); and

a community expansion module to expand communities by adding affiliated objects to the communities, wherein the expansion of a community is based at least in part on the core set of objects of the community and links from objects of the plurality of

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objects to the core set of objects of the community (Figure 6, column 3 lines 5 – 12, column 5 lines 54 – 61, column 7 lines 8 – 10, et seq.).

Regarding claim 34, Pitkow discloses,  
identify links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

find groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identify, as a core object set, one or more of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 35, Pitkow discloses,  
identify links between objects of the plurality of objects; and  
for each community,

identify one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the objects of the core object set of the community (Figure 5, column 10 lines 25 – 30, et seq.),  
and

include, in the set of affiliated objects of the community, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, et seq.).

Regarding claim 36, Pitkow discloses,  
a core set merging module to merge together a first of the communities and a second of the communities if there is sufficient similarity between the core objects in the first of the communities and the core objects in the second of the communities, wherein

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the core set merging module generates a merged community that includes all of the objects of the first of the communities and the second of the communities and has a set of core objects that includes the core objects from the first of the communities and the core objects from the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 37, Pitkow discloses,

a community merging module to merge together a first of the communities and a second of the communities if there is sufficient similarity between the core and affiliated objects of the first of the communities and the core and affiliated objects of the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, column 10 line 15, et seq.).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow in view of U.S. Publication Number 2006/0031246 issued to Loren P. Grayson (hereinafter "Grayson").

Regarding claim 16, Pitkow discloses the method of claim 1 as discussed above under 102-rejection section.

Pitkow does not explicitly disclose each of the plurality of objects comprises a person.

However, Grayson discloses each of the plurality of objects being a person (Figure 21, paragraph 358, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because the combination of the two methods would have provided a system capable of modeling and presenting data of all relationships in a form that supports any data (paragraphs 28 – 29).

Regarding claim 17, Grayson discloses identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a relationship of one person to another person (Figure 21, paragraph 358, et seq.).

Claims 28 and 38 - 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow in view of U.S. Publication Number 2002/0152222 issued to David M. Holbrook (hereinafter "Holbrook").

Regarding claim 28, Pitkow discloses the one or more computer readable media of claim 20 as discussed under 102-rejection section.

Pitkow does not explicitly disclose assigning a collection of objects to a center portion of a model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object.

However, Holbrook discloses assigning a collection of objects to a center portion of a model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object (Figure 4, paragraph 156, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Regarding claim 38, Pitkow discloses grouping a first collection of a plurality of objects (column 11 line 3: source site, et seq.), grouping a second collection of the plurality of objects (column 11 line 7: destination site, et seq.), and identifying, as the community of objects, the groupings of the first and second collections of the objects (column 10 lines 24 – 30, et seq.).

Pitkow does not explicitly disclose grouping the collection of objects into a center portion and into one or more concentric portions.



However, Holbrook discloses grouping the collection of objects into a center portion and into one or more concentric portions (Figure 4, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Regarding claim 39, Holbrook discloses both the center portion and the one or more concentric portions collectively are a set of concentric circles (Figure 4, et seq.).

Regarding claim 40, Holbrook discloses the center portion comprises a circle (Figure 4, et seq.)

Regarding claim 41, Holbrook discloses the one or more concentric portions each comprise a circle (Figure 4, et seq.).

Regarding claim 42, Pitkow discloses the first collection of the objects comprises a core set of objects (column 10 lines 24 – 30, column 11 lines 13 – 14, et seq.).

Regarding claim 43, Pitkow discloses each object of the second collection of the objects comprises an affiliated object (column 10 lines 24 – 30, column 11 lines 13 – 14, et seq.).

Regarding claim 44, Pitkow discloses one of more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to describe a community of objects by: assigning a group of core objects of the community (Figure 1, column 3 lines 1 – 5, column 5 lines 54 – 58, et seq.); and assigning a group of affiliated objects of the

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community (Figure 6, column 3 lines 5 – 12, column 5 lines 54 – 61, column 7 lines 8 – 10, et seq.).

Pitkow does not explicitly disclose creating a set of concentric circles and assigning a group of objects to the center circle and to one or more circles of the set of concentric circles, wherein the one or more circles surround the center circle.

However, Holbrook discloses creating a set of concentric circles and assigning a group of objects to the center circle and to one or more circles of the set of concentric circles, wherein the one or more circles surround the center circle (Figure 4, paragraph 156, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's circles would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Number 6,886,129 issued to Prabhakar Raghavan et al discloses a method and system for identifying groups of pages of common interest from a collection of hyper-linked pages.

U.S. Patent Number 6,996,577 issued to U. V. S. Ravi Kiran et al discloses a method and system for grouping one or more interested objects based on their corresponding accesses patterns with regard to other objects.

U.S. Publication Number 2003/0041054 issued to Jianchang Mao et al discloses merging list of entries based upon the representative value assigned to each result list.

***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sangwoo Ahn whose telephone number is (571) 272-5626. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sangwoo Ahn  
Patent Examiner  
AU 2166

2/17/2006 SW

  
**HOSAIN ALAM**  
**SUPERVISORY PATENT EXAMINER**